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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,235

04/26/2006

Kazushi Hayashi

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EXAMINER

TRAN, BINH X

ART UNIT

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1792

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,235	Applicant(s) HAYASHI ET AL.	
	Examiner Binh X. Tran	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/26/06; 7/12/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the peripheral surface" (occurs two times) in line 7 and line 10. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface-- in order to provide proper antecedent basis.

Claim 1 recites the limitation "the axis" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the region" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the position" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

In the last line of claims 4-5, "the neighborhood" lacks antecedent basis. Further, it is unclear what specific distance/space from the base material surface that applicants consider as "in the neighborhood".

Claims 2-6 are indefinite because they directly or indirectly depend on indefinite claim 1.

Claim 7 recites the limitation "the peripheral surface" (occurs three times) in lines 8, 10-11. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface-- in order to provide proper antecedent basis.

Claim 8 recites the limitation "the region" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the peripheral surface" in line 2. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface--.

Claim 12 recites the limitation "the peripheral surface" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface--.

Claim 13 recites the limitation "the peripheral surface" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface--.

Claim 14 recites the limitation "the peripheral surface" in lines 3 and 9. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface--.

Claim 15 recites the limitation "the region" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the peripheral surface" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface--.

Claim 23 recites the limitation "the peripheral surface" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface--.

Claims 8-24 are indefinite because they directly or indirectly depend on indefinite claim 7.

In line 3 of claim 25, "the neighborhood" lacks antecedent basis. Further, it is unclear what specific distance/space from the base material surface that applicants consider as "in the neighborhood".

Claim 25 recites the limitation "the peripheral surface" in lines 8-9 and lines 16-17 (occurs three times). There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface--.

Claim 27 recites the limitation "the peripheral surface" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing "the peripheral surface" to --the cylindrical peripheral surface--.

Claims 26-27 are indefinite because they depend on indefinite claim 25

Allowable Subject Matter

4. Claims 1, 7, 25 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

5. Claims 2-6, 8-24, 26-27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Respect to claims 1-6, the cited prior arts fail to disclose or suggest the step supplying a surface treating gas onto the surface of the base material using an equipment having an opposing member and a rotor with a cylindrical peripheral surface; the opposing member and the cylindrical peripheral surface being separated by a narrow gap from each other, and by rotating the rotor around the axis almost perpendicular to the base material-conveying direction and allowing the surface-treating gas to be dragged by the peripheral surface of the rotor into the narrow gap and further fed from the gap onto the base material surface.

Respect to claims 7-24, the cited prior arts fail to disclose or suggest an equipment comprising a base material conveying means and a gas supplying means; wherein the gas-supplying means comprises a rotor having a cylindrical peripheral

Art Unit: 1792

surface with an axis almost perpendicular to the base material-conveying direction, a rotating means of rotating the rotor around the axis and an opposing member formed at a position facing the cylindrical peripheral surface of the rotor as separated by a gap; and the opposing member is so placed that the surface-treating gas dragged in by the peripheral surface with the rotation of the rotor is driven to the gap between the peripheral surface of the rotor and the opposing member and fed from the gap onto the base material surface in combination with all other limitations in the claims.

Respect to claim 25 the cited prior arts fail to disclose or suggest an equipment comprising a base material conveying means and a gas supplying means, wherein the gas supplying means comprise a rotor; a partitioning member covering the rotor except the region of the rotor facing the surface of the base material and an electric field-forming means of forming an electric field between the face of the partitioning member facing the surface of the base material and the surface of the base material; the surface-treating gas supplied into the partitioning member is driven into the gap between the peripheral surface of the rotor and the surface of the base material by rotation of the rotor as it is dragged in by the peripheral surface; and the rotor and the partitioning member are so placed that plasma is generated as the surface treating gas is supplied from the gap into the region where an electrical field is formed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.

Art Unit: 1792

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X. Tran whose telephone number is (571)272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Binh X Tran
Primary Examiner
Art Unit 1792

/Binh X Tran/
Primary Examiner, Art Unit 1792